

1. (Amended) A mobile telephone communications system having a multi-level distributed architecture, said system comprising:

a plurality of base station transceiver subsystems (BTSs) arranged across a plurality of cells, each base station transceiver subsystem (BTS) operable for establishing a radio frequency interface with a subscriber unit in conjunction with a telephone call;

at least one first level PSEL unit coupled to a prescribed plurality of base station transceiver subsystems, said at least one first level PSEL unit for implementing a first level power control and frame selection of compressed packet data in conjunction with the telephone call, each said first level PSEL unit being positioned proximate a respective prescribed plurality of base station transceiver subsystems;

second level PSEL unit coupled to said at least one first level PSEL unit, said second level PSEL unit for implementing a second level power control and frame selection of compressed packet data in conjunction with the telephone call;

router coupled to said second level PSEL unit, said second level PSEL being coupled between said at least one first level PSEL unit and said router on a BTS-side of said router, said router for routing compressed packet data in conjunction with the telephone call from said at least one first level PSEL unit through said second level PSEL unit and to said at least one first level PSEL unit through said second level PSEL unit; and

at least one CSEL unit coupled between said router and a prescribed mobile switching center (MSC) on an MSC-side of said router, said at least one CSEL unit separate from said at least one first level PSEL and said second level PSEL for implementing call processing and call management in conjunction with the telephone call, said at least one CSEL unit further being positioned proximate the MSC, said

router further for routing compressed packet data between said second level PSEL unit on the BTS-side of said router and said at least one CSEL unit on the MSC-side of said router.

2. (Amended) The system of claim 1, wherein

said at least one first level PSEL unit includes a plurality of first level PSELs for implementing a first level power control and frame selection, the plurality of first level PSELs being coupled to and positioned proximate a respective prescribed plurality of base station transceiver subsystems, further wherein

said second level PSEL unit operates in either of two modes, i) a first mode including a pass-through mode wherein frame selection is performed by a first level PSEL and ii) a second mode, wherein a particular movement of the subscriber unit gives rise to the occurrence of a soft handoff between BTSs of different first level PSELs and said second level PSEL operates to handle the soft handoff while placing respective first level PSELs in a pass-through mode.

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9. (Amended) A mobile communications system having a multi-level distributed architecture, said system comprising:

a plurality of base station transceiver subsystems (BTSs) arranged in cells, each base station transceiver subsystem (BTS) operable for establishing a radio frequency interface with a subscriber unit in conjunction with a telephone call;

PSEL means coupled to and being positioned proximate said plurality of base station transceiver subsystems, said PSEL means for implementing a power control and frame selection of compressed packet data in conjunction with the telephone call;

router coupled to said PSEL means on a BTS-side of said router, said router for routing compressed packet data to and from said PSEL means; and

CSEL means coupled between said router and a prescribed mobile switching center (MSC) on an MSC-side of said router and further being positioned proximate the MSC, said CSEL means being separate from said PSEL means, said router further for routing compressed packet data between said PSEL means on the BTS-side of said router and said CSEL means on the MSC-side of said router.

Q2 10. (Amended) The system of claim 9, wherein said PSEL includes at least one first level PSEL for implementing a first level power control and frame selection, the at least one first level PSEL being coupled to and positioned proximate a respective prescribed plurality of base station transceiver subsystems, said system further comprising:

second level PSEL means for implementing a second level power control and frame selection in conjunction with the telephone call, said second level PSEL coupled to and positioned proximate the at least one first level PSEL, wherein upon a particular movement of the subscriber unit giving rise to the occurrence of a soft handoff between BTSs of different first level PSELs, said second level PSEL is configured to handle the soft handoff and places the respective first level PSELs in a pass-through mode, further wherein said router routes compressed packet data to and from the at least one first level PSEL through said second level PSEL.

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17. (Amended) A method for establishing a multi-level distributed architecture for a mobile telephone communications system, said method comprising the steps of:

Q3 providing a plurality of base station transceiver subsystems (BTSs) arranged across a plurality of cells, each base station transceiver subsystem (BTS) operable for establishing a radio frequency interface with a subscriber unit in conjunction with a telephone call;

implementing a first level power control and frame selection of compressed packet data in conjunction with the telephone call with the use of at least one first level PSEL unit, each first level PSEL unit being coupled to and positioned proximate a respective prescribed plurality of base station transceiver subsystems;

implementing a second level power control and frame selection of compressed packet data in conjunction with the telephone call with the use of a second level PSEL unit, the second level PSEL unit coupled to the at least one first level PSEL unit;

routing compressed packet data in conjunction with the telephone call from the at least one first level PSEL unit through the second level PSEL unit and to the at least one PSEL unit through the second level PSEL unit with the use of a router coupled to the second level PSEL unit on a BTS-side of the router; and

implementing call processing and call management in conjunction with the telephone call with the use of at least one CSEL unit, the at least one CSEL unit being separate from the at least one first level PSEL unit and the second level PSEL unit, the at least one CSEL unit coupled between the router and a prescribed mobile switching center (MSC) on an MSC-side of the router, the at least one CSEL unit further being positioned proximate the MSC, wherein the router is further for routing compressed packet data between the second level PSEL unit on the BTS-side of the router and the at least one CSEL unit on the MSC-side of the router.

18. (Amended) The method of claim 17, wherein

the at least one first level PSEL includes a plurality of first level PSELs for implementing a first level power control and frame selection, the plurality of first level PSELs being coupled to and positioned proximate a respective prescribed plurality of base station transceiver subsystems, further wherein

93 the second level PSEL operates in either of two modes, i) a first mode including a pass-through mode wherein frame selection is performed by a first level PSEL and ii) a second mode, wherein a particular movement of the subscriber unit gives rise to the occurrence of a soft handoff between BTSs of different first level PSELs and the second level PSEL is configured to handle the soft handoff while placing respective first level PSELs in a pass-through mode.

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22. (Amended) A method of implementing a multi-level distributed architecture in a mobile communications system, said method comprising the steps of :

providing a plurality of base station transceiver subsystems (BTSs) arranged in cells, each base station transceiver subsystem (BTS) operable for establishing a radio frequency interface with a subscriber unit in conjunction with a telephone call;

94 implementing a power control and frame selection of compressed packet data in conjunction with the telephone call with the use of a PSEL unit, the PSEL unit coupled to and being positioned proximate the plurality of base station transceiver subsystems;

routing compressed packet data to and from the PSEL unit with the use of a router coupled to the PSEL unit on a BTS-side of the router; and

implementing call processing and call management in conjunction with the telephone call with the use of a CSEL unit, the CSEL unit coupled between the router and a prescribed mobile switching center (MSC) on an MSC-side of the router and further being positioned proximate the MSC, the CSEL unit being separate from the PSEL unit, the router further for routing compressed packet data between the PSEL unit on the BTS-side of the router and the CSEL unit on the MSC-side of the router.

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23. (Amended) The method of claim 22, wherein the PSEL unit includes at least one first level PSEL for implementing a first level power control and frame selection, the at least one first level PSEL being coupled to and positioned proximate a respective prescribed plurality of base station transceiver subsystems, said method further comprising the step of:

implementing a second level power control and frame selection in conjunction with the telephone call with the use of a second level PSEL, the second level PSEL coupled to and positioned proximate the at least one first level PSEL, wherein upon a particular movement of the subscriber unit giving rise to the occurrence of a soft handoff between BTSs of different first level PSELs, the second level PSEL operates to handle the soft handoff and places the respective first level PSELs in a pass-through mode, further wherein the router routes compressed packet data to and from the at least one first level PSEL through the second level PSEL.

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